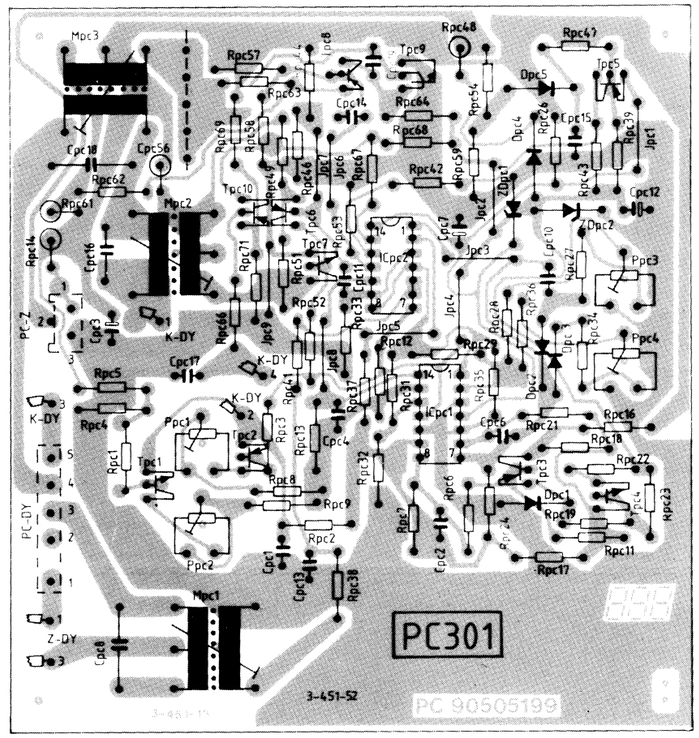


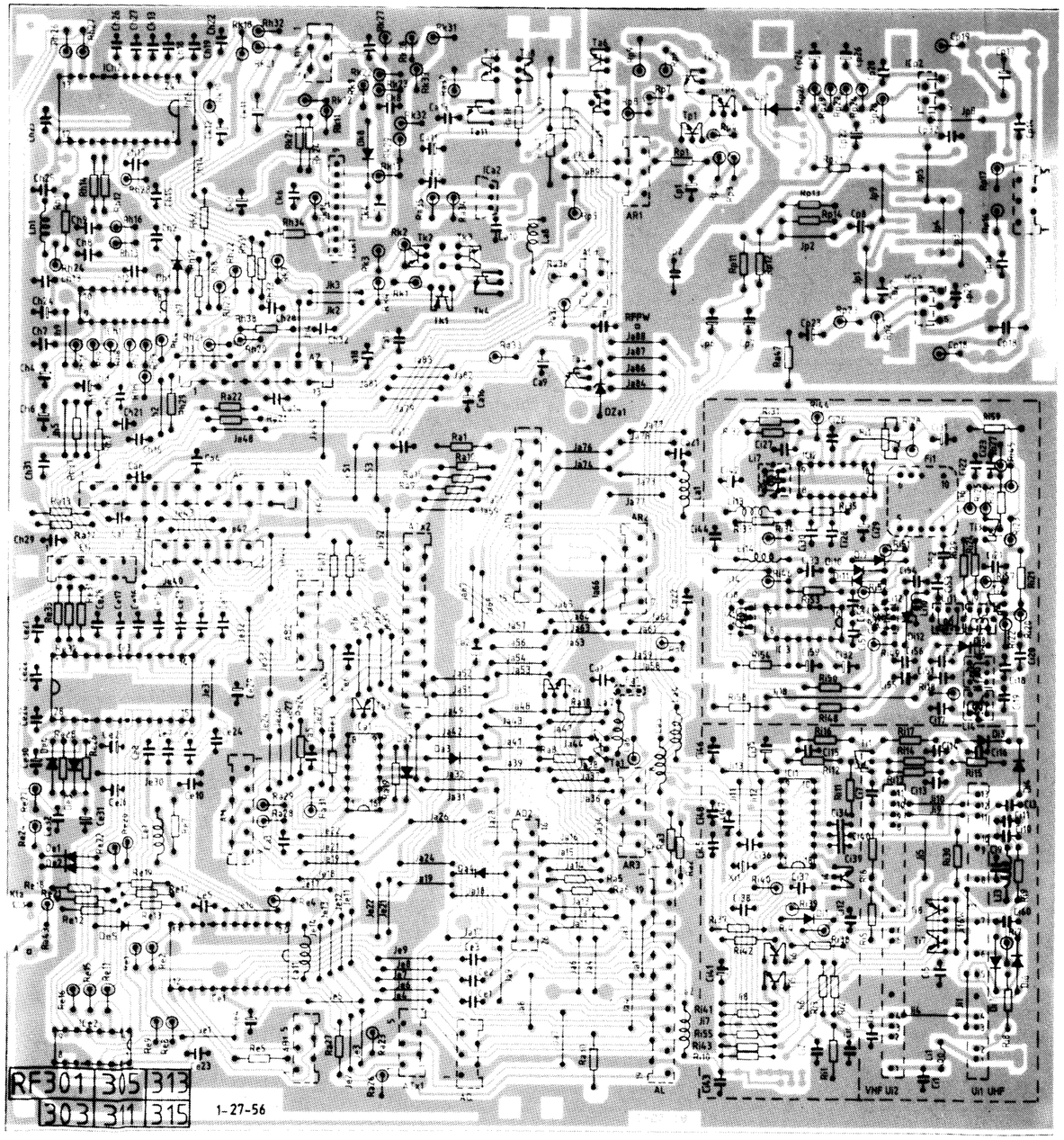

# 020.899 1 mit S-VHS-Anschluß

# SCHALTBILD, LEITERPLATTEN

Großversandhaus Quelle, Gustav Schickedanz KG. Nachdruck nicht gestattet
Kundendienstzentralleitung Ulmenstraße 52 **Nürnberg** Änderungen vorbehalten
Bei allen Reparaturen sind die gültigen Sicherheitsvorschriften zu beachten!

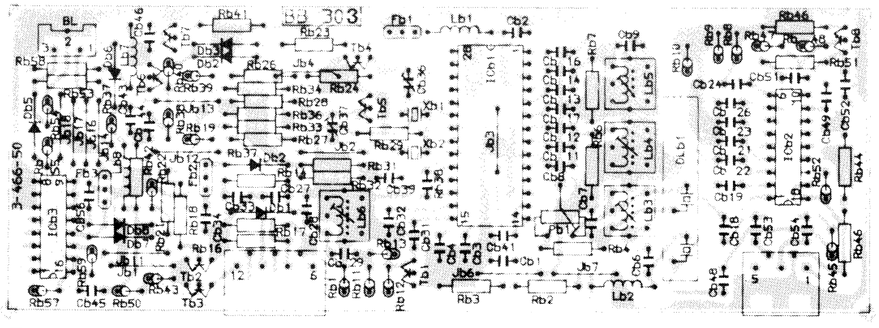
6700-451/1184

# RF 315 (727 957 3)



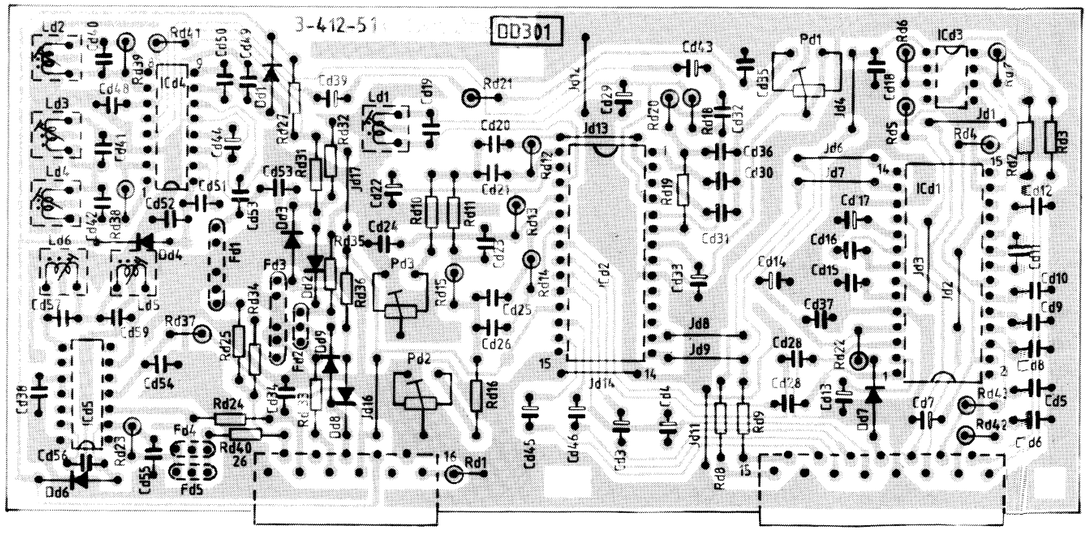

Signal-Einheit

# BB 303 (727 959 9)

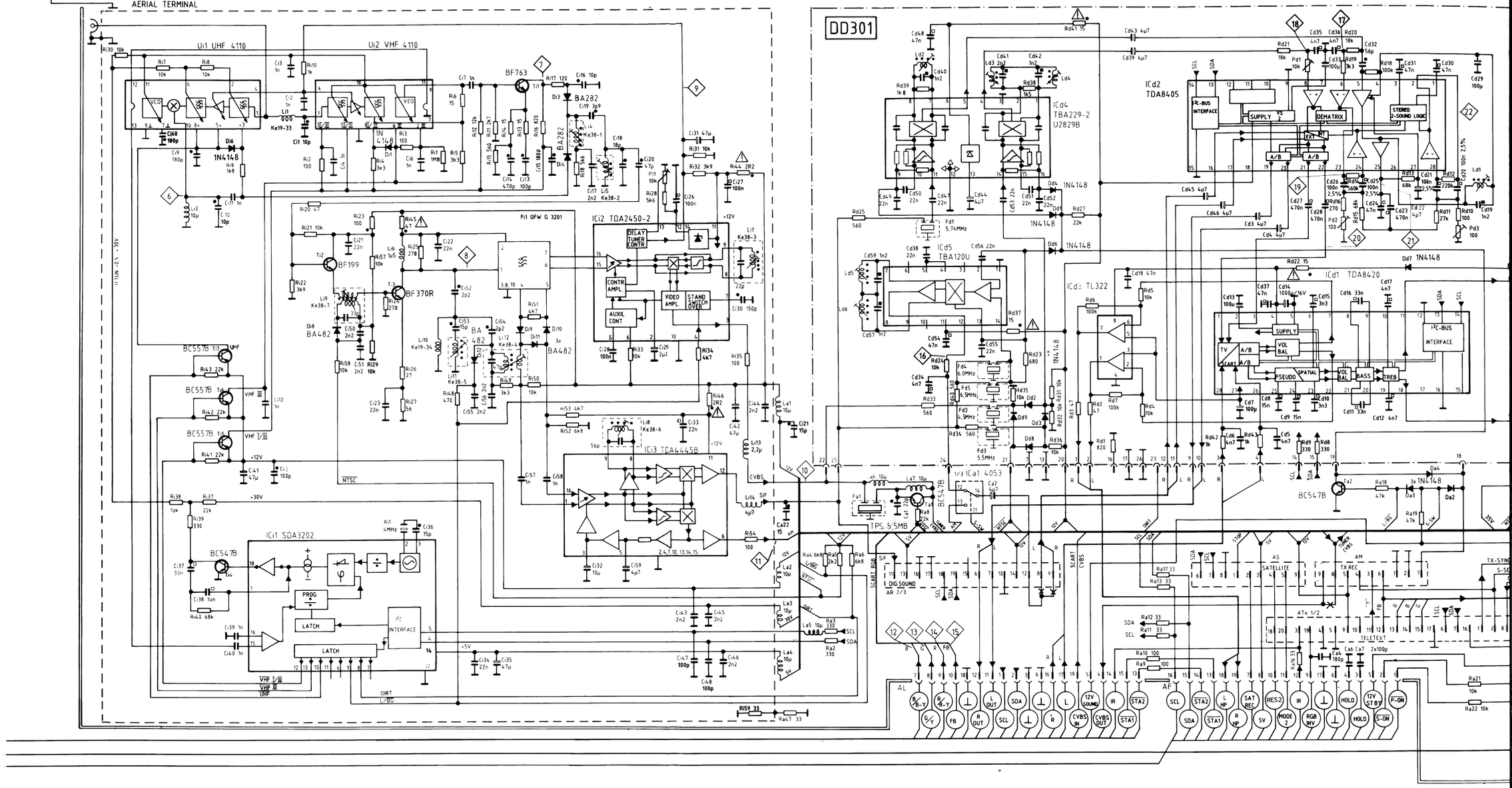



Farbdecoder-Modul

# DD 301 (727 038 2)

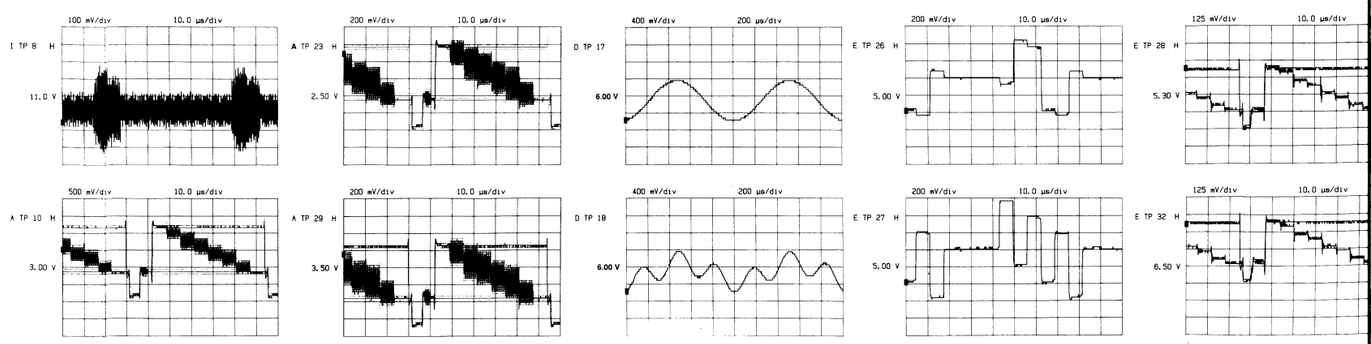



Ton-Modul




# UNIVERSUM

83101115



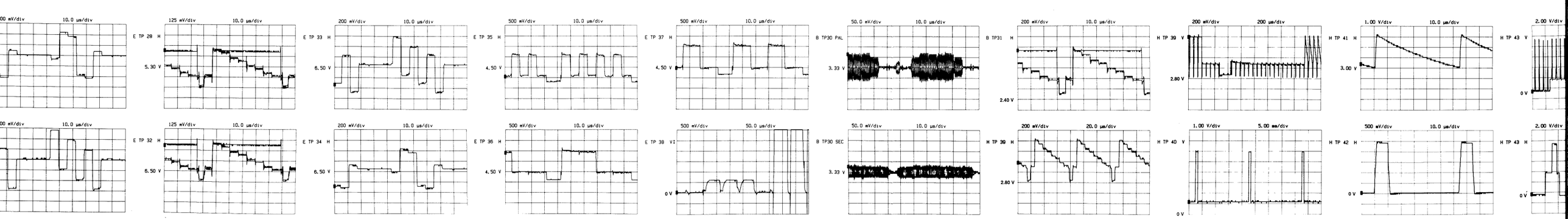
GERMANY

| | |
|---|---|
| RF311 | TOSHIBA 30W SOUND |
| 313 | PHILIPS 30W SOUND |
| 315 | VIDEOCOLOR 30W SOUND |

BB303

| Ibb1 | PAL | SECAM | NTSC |
|---|---|---|---|
| pin 20 | 57V | 5.7V | 7.7V |
| pin 21 | 7.9V | 7.2V | 5.6V |

ICp2 TDA2040 · ICp1 TDA2040 · ICd1 TDA8420 · ICb1 TDA4555 · ICb2 TDA4565 · ICh1 TDA2579 · ICh2 TDA · ICe1 TDA8443A · ICe2 TDA8444 · ICe3 TDA3505 · TFS 4.43Mb · 2/3xICa1 4053 · 1/3 4053 · 2/3 4053 · ICa2 7812



303

| AL | SECAM | NTSC |
|---|---|---|
| V | 5.7V | 7.7V |
| V | 7.2V | 5.6V |

TPS 4.43Mb

ICb1 TDA4555

ICb2 TDA4565

ICe3 TDA3505

ICh1 TDA2579

ICh2 TDA8432

ICk1 TDA3654

IC2 4053

Ca2 TDA 7812

BC547B

BC557B

BC337-25

BD241A

BD241A

BZX83C5V6

2x BC557B

BC547B

BD241A

1N4148

1N4007

2x 1N4148

2x 1N4148

2x 1N4148

2x 1N4148

2x 1N4148

BA 482

BA 482

2x1N4148

2x 1N4148

2x 1N4148

2x 1N4148

2x 1N4148

1N4148

1N4148

B/B-Y =BLUE OR B-Y COLOUR DIFFERENCE SIGNAL

G/Y =GREEN OR LUMINANCE SIGNAL

R/R-Y =RED OR R-Y COLOUR DIFFERENCE SIGNAL

FB =FAST BLANKING SIGNAL

R OUT =RIGHT AUDIO CHANNEL

L OUT =LEFT AUDIO CHANNEL

SCL =SERIAL CLOCK

SDA =SERIAL DATA

R IN =RIGHT AUDIO CHANNEL

L IN =LEFT AUDIO CHANNEL

EVBS IN =VIDEO SIGNAL

EVBS OUT =VIDEO SIGNAL

RC =REMOTE CONTROL

STA1 =STATUS FROM SCART 1

STA2 =STATUS FROM SCART 2

L HP =LEFT AUDIO CHANNEL FOR HEADPHONES

R HP =RIGHT AUDIO CHANNEL FOR HEADPHONES

SAT COPY =SATELLITE COPYING

MODE 1 =MODE INFORMATION 1

MODE 2 =MODE INFORMATION 2

RGB INV =RGB INVERTING

HOLD =PROCESSOR DISCONNECTING FROM I²C-BUS

P-ON =PICTURE ON DRIVING VOLTAGE 12 V

S-ON =SOUND ON DRIVING VOLTAGE 12 V

BC =BLACK CURRENT

EW =EAST-WEST RASTER CORRECTION

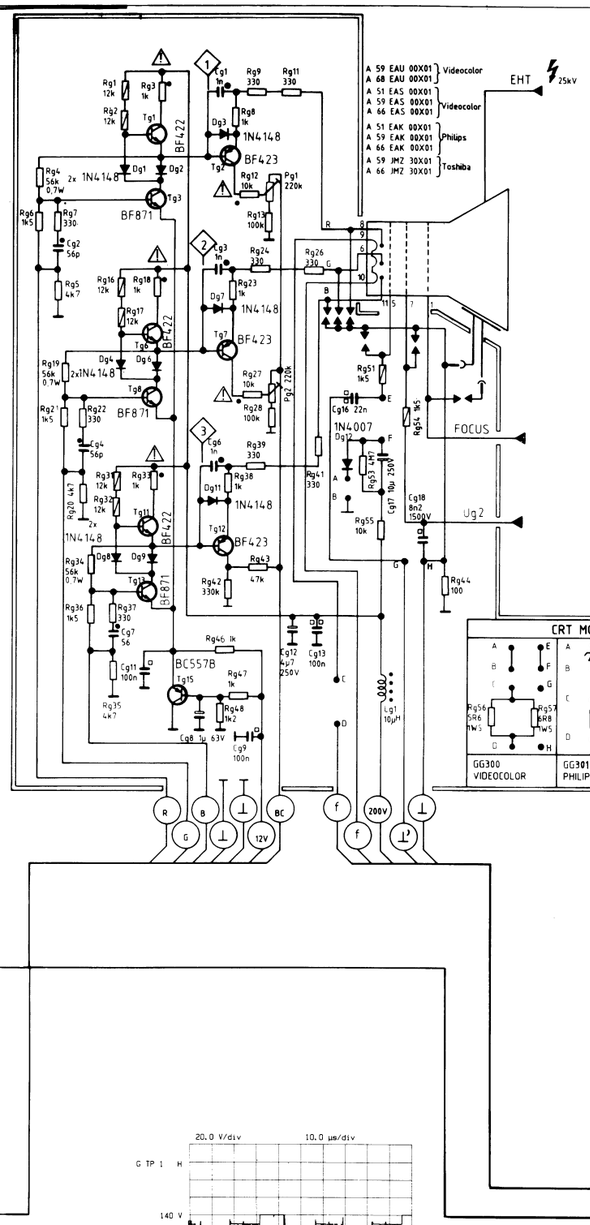
BCL =BEAM CURRENT LIMITING VOLTAGE

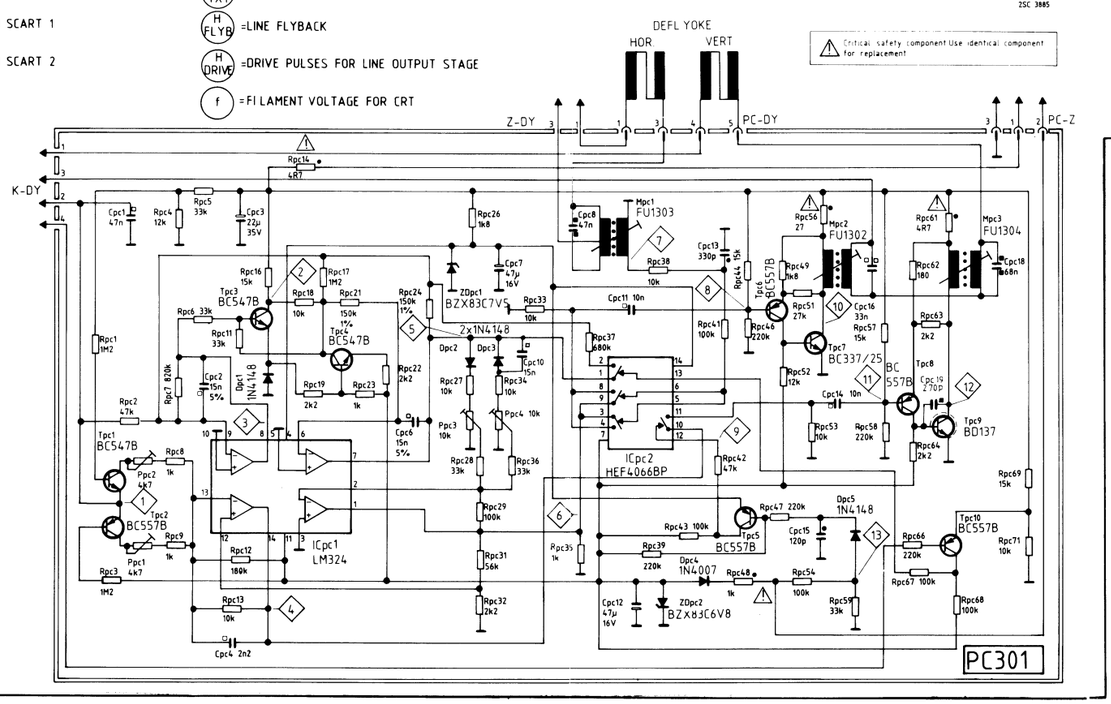
7V TXT =SUPPLY VOLTAGE FOR TELETEXT MODULE

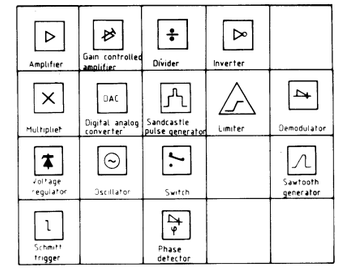
H FLYB =LINE FLYBACK

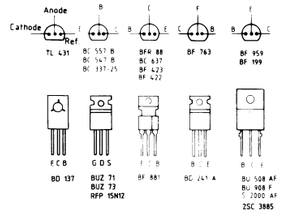
H DRIVE =DRIVE PULSES FOR LINE OUTPUT STAGE

f =FILAMENT VOLTAGE FOR CRT

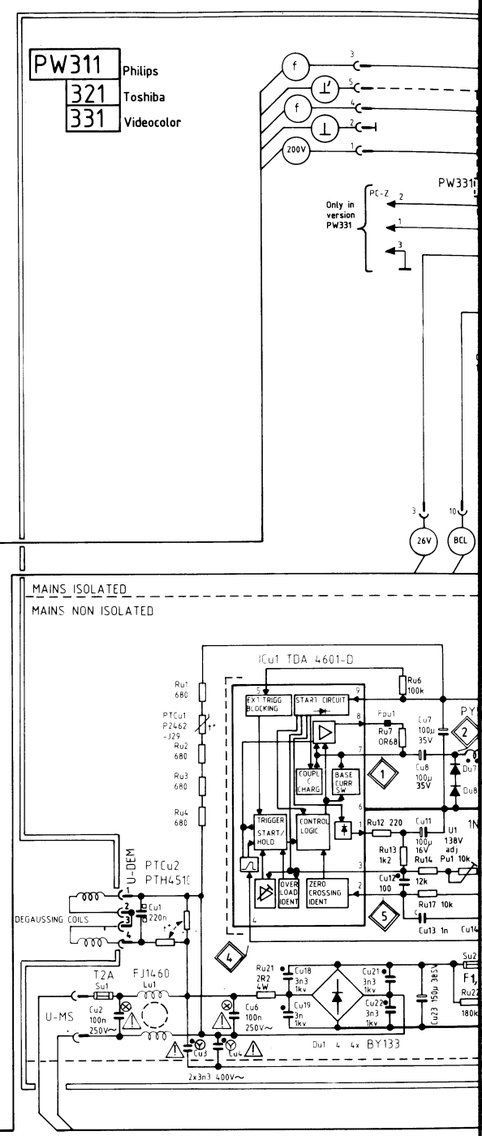


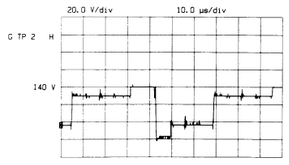



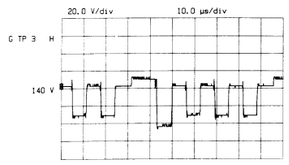



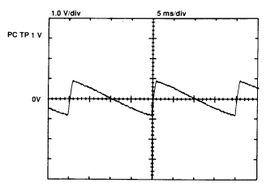



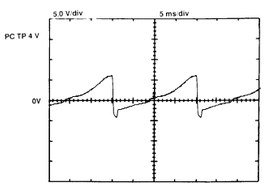

⚠ Critical safety component Use identical component for replacement

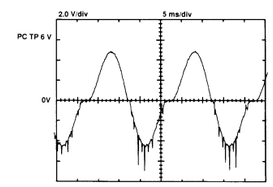


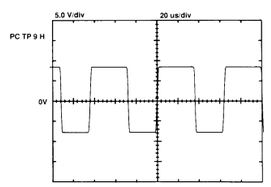


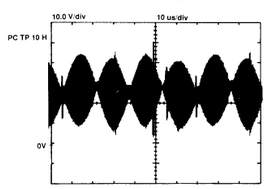



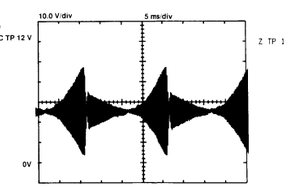



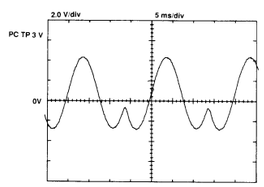



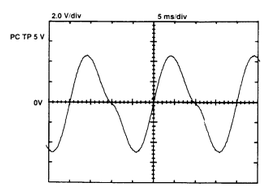



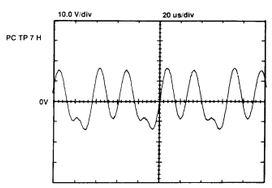



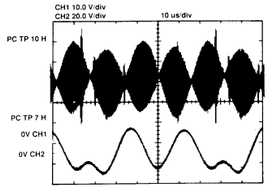



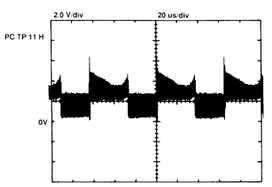



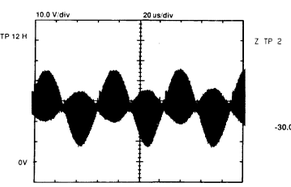


**PW311** Philips
**321** Toshiba
**331** Videocolor

Divider | Inverter
Sandcastle pulse generator | Limiter | Demodulator
Switch | Sawtooth generator
Phase detector

BC 557 B, BC 547 B, BC 337-25 — BFR 88, BC 637, BF 423, BF 422 — BF 763 — BF 959, BF 199
G D S — BUZ 71, BUZ 73, RFP 15N12 — F C B — BF 881 — B C E — BC 241 A — B C E — BU 508 AF, Bu 908 F, S 2000 AF, 2SC 3885 — B C E

L safety component Use identical component replacement

to LL-mod.

PC-Z

PW311 PW321

PW331 Rz5 10k

Only in version PW331

Rz1 27

Cz1 100n

Cz4 330

Dz1

Rz2 2R2

Cz2 4u7 250V

Cz3 2n2

PY55-600

Dz2

Rz4 1R0

Cz6 2200u 35V

Dz3 1N4007

PW311

Mz1 472914

EHT 25kV

FOCUS UG2

400M

1M5

100M

Mz3

PW321 *Mz3=FM1644 *Cz13=8n7 1600V

Cz26 10n

Rz33 390 1W5

Lz3

FU1200

Cz19 470n

Cz22 4u7 250V

Dz6

Rz32 10k

PW311 *Mz3=FM1645 *Cz13=8n4 1600V

Cz23 68n Lz4

FU1201

Cz19 270n

Lz5

PW331 *Mz3=FM1644 *Cz13=8n4 1600V

Cz19 390n

Cz22 4u7 250V

Rz33 1k 1W5

Rz32 10k

PW321 PW331

Cut off 21" and 24" tube

Rz10 33

Rz20 150k

Rz16 33k

Rz17 15

Rz18 15

Cz7 1u

Rz7 10k

Rz8 10k

Rz9 10k

Rz11 4k7

BC547B

Cz8 100u 35V

Rz13 1k

Cz9 220n

Rz12 1k

Cz11 56

1N4148

BC547B

BC637

Mz2 83610

Rz19 27k

Rz21 220k

BU508A

Rz22 Rz23

Rz24 Rz26 Rz27 27

Cz15 330

Cz14 4u7

Rz28 1R5

Cz16 470n

Cz18 330n

FJ297 Lz1

Cz17 15n 630V

Ke17-60 Lz3

Rz31 47

Rz29 Rz7

Dz7 BY228

Dz8 BY299

PC 300

(CIRCUIT DIAGRAM ON THE LEFT)

HOR DEFL. YOKE

Z-DY

Z-A

26V BCL EW FLY BACK H DRIVE

MAINS ISOLATED

MAINS NON ISOLATED

Mu1 SZ1-56121

ICu1 TDA 4601-D

START CIRCUIT

EXT TRIGG BLOCKING

COUP. CHARG

BASE CURR SW

TRIGGER START/ HOLD

CONTROL LOGIC

OVER LOAD IDENT

ZERO CROSSING IDENT

PTCu1 P2462 -J29

Ru1 680

Ru2 680

Ru3 680

Ru4 680

Ru6 100k

Du6

Ru7 OR68

Fpu1

Cu7 100µ 35V

Cu8 100µ 35V

Du7

Du8

Lu2 Su3

PY55-600

Ru9 68 7W

Cu9 2n2 2000V

Tu1 2SC 3885

Ru8 27

Ru12 220

Cu11 100µ 16V

Ru14

U1 138V adj Pu1 10k

1N4007

PY55-600

Ru16 33 4W

Cu17 22n

Ru13 1k2

Cu12 100

Ru17 10k

Cu13 1n

Cu14 10n

Cu16 1µ 63V

Du11

Ru18 120k

Ru19 150k

Cu24 10n

Ru24 10M

Cu25 1n5 I

400V~

Ru21 2R2 4W

Cu18 3n3 1kv

Cu19 1n 1kv

Cu21 3n3 1kv

Cu22 3n3 1kv

Cu23 150µ 250V

Du1 .. 4 4x BY133

Ru22 180k

Ru23 180k

Su2 F1,25A

Cu3 100n 250V~

Cu4 100n 250V~

Cu5

Cu1 220n

Cu2 100n 250V~

Su1 T2A

Lu1 FJ1460

U-DEM PTCu2 PTH451

DEGAUSSING COILS

U-MS

2x3n3 400V~

Ru32 12k

Cu33 47k 250V

Cu34 100n

Ru34 1k 1W5

Du16

BY299

BZ83 B30

BUZ73

Tr1

Kr1 Ke36-4

Dr1 1N4007

Rr1 4k7

Rr2 11k

BZX83C12

Rr3 4k64

Rr4 100k

Rr5 1k62

BZX83 B30

ZDr3

TL 431

ICr1

RR 300

BZX83 B30

ZDu1

Ru31 12k

Cu31 100n

Z-A

30V 35V 17V 7V 7V

Du19 IN4007

Cu36 330

Du17

BY399

Cu37 470µ 50V

Cu38 100n

Cu41 330

Ru38 0R1

Fpu 2,3

Cu42 470µ 35V

Cu44 330

Ru39 0R1

Fpu 4,5

Du21

BY299

Cu46 470µ 16V

Cu47 100n

Cu43 100n

AUDIO AMPLIFIER GND

PWRF

PC301

FC300

YC300

3x BC327-25

Tf1 Tf2

Rf10 10

Cf28 In

Cf27 In

Rf2 100

Rf3 100

Rf5 100

Rf6 100

Cf5 100µ

ICf1 SDA2526

Cf7 0µ1

Cf1 0µ1

Cf2 0µ1

3x10µ Lf1 Lf2

Cf36 4n7

Cf3 100µ

Cf4 100µ

Cf37 4n7

FT

R L

SP SOUND LED±3 LED±4 LED±5 SOURCE LED±6

LEDy1 LEDy2

2xHD11056p

Rf7 270

Rf8 270

Cf34 100

Cf33 100

Rf39 100

Rf38 100

Rf37 2k7

Rf36 2k7

SDA SCL 5V

LFf6 6µ8

Rf35 100

Lf7 6µ8

Rf16 Rf17 Rf18 Rf19 4x270

Lf4 10µ

Cf9 100µ

Cf11 0µ1

Cf10

Rf47 10k

NC300

LEDn1 LEDn2 LEDn3 LEDn4

N1 N2 N3

Rf9 5x270

Rf10 Rf11 Rf12 Rf13 Rf14 Rf15 5x270

Rf34 100

Cf29 220

Cf31 Cf32 220 220

ICf2 SDA 2080

8.86MHz

Cf12 27

Cf13 27

Rf48 270

Rf49 1k

Rf51 1k

Rf52 1k

Rf53 270

Rf54 1k

Rf56 1k

Rf59 100

Cf14 220

Cf16 1n

Cf17 1n

Cf15

Cf18 220

Cf19 220

Cf 21 220

Cf 22 220

RGB INV S-ON P-ON MODE 2 STA 1 STA 2 IR HOLD 1 HOLD 2 12V

Rf1 390

STEP + STEP -

COPY HUOLTO

M N1 N2 N3 F1+ F1-

J 03303704

1N4148

Df10

Rf63 1M

Cf23 330

Cj11 0µ1

Rj6 1k8

Cj1 10µ

Rj7 3k3

PDj1

Rj1 270k

Rj3 15k

Cj3 3n3

Tj1 BC549B

Cj2 4n7

Rj2 100k

Rj4 15k

Cj4 4n7

Cj6 2µ2

Cj7 4µ7

ICj1 TDA4050B

Rj8 3k3

Rj9 3k3

Cj8 3n3

Cj9 2n2

Cj10 2n2

Rj10 1k8

Rf64 68k

Tf4 BC557B

Rf66 10k

Tf5 BC557B

Rf67 10k

Rf45 270

Rf68 270

4

CVBS CVBS STATUS CVBS L L R R

RIS1 1k

CVBS CVBS FB R G STATUS CVBS B L R R

Rf29 470

Rf41 100k

Rf39 10k

Rf38 10k

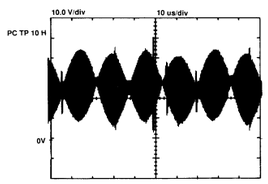
Tf6 2xBC547B

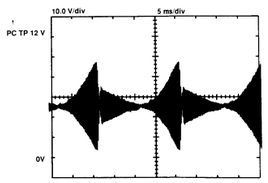
Rf42 4k7

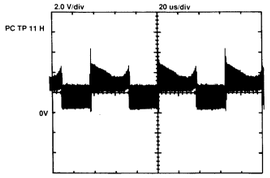
Rf43 4k7

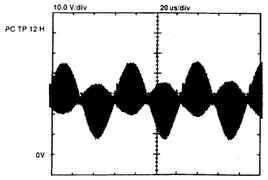
Rf37 10k

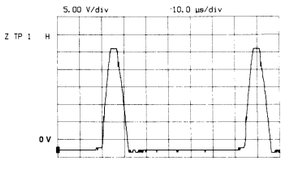
STA 2

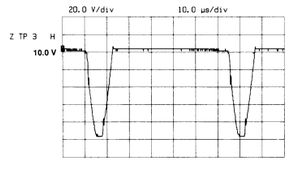


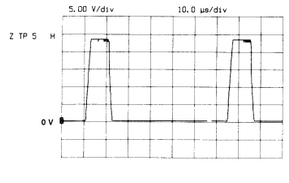



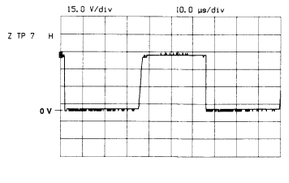



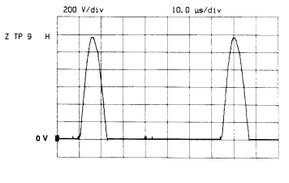



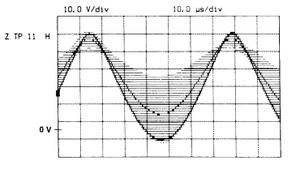



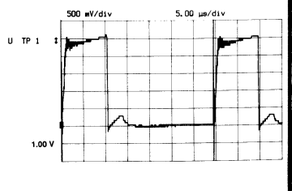



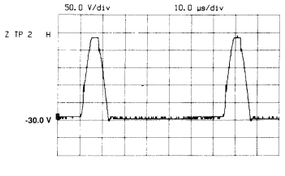



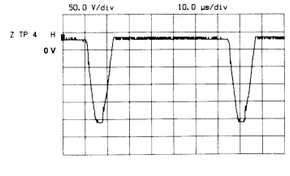



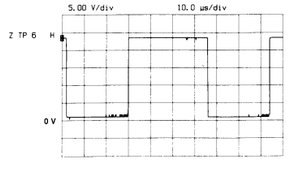



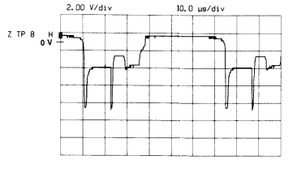



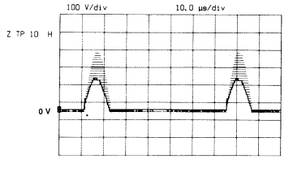



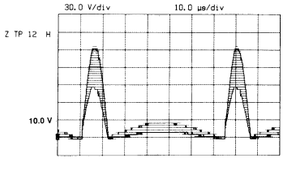



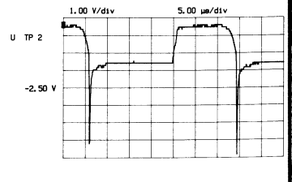



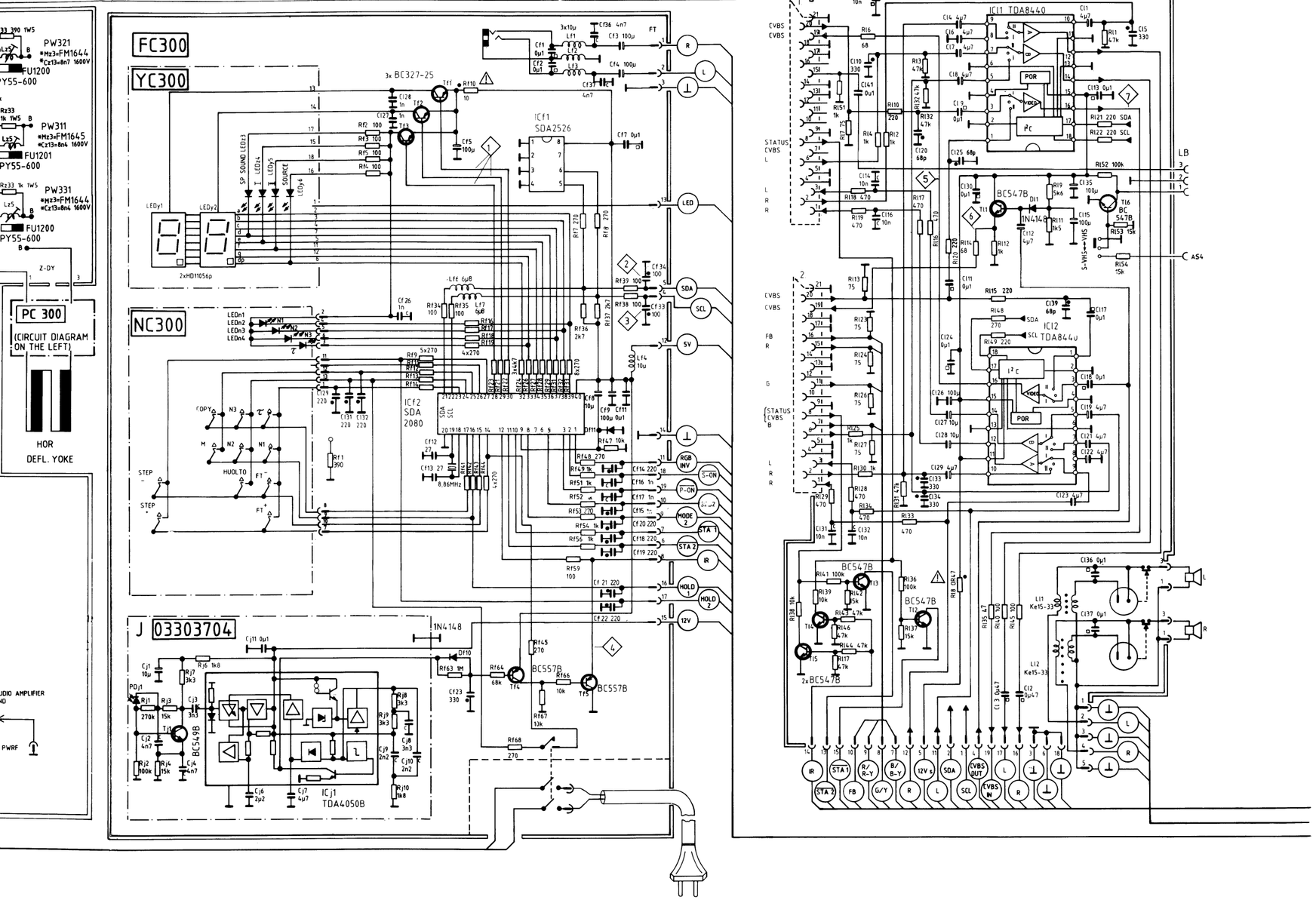



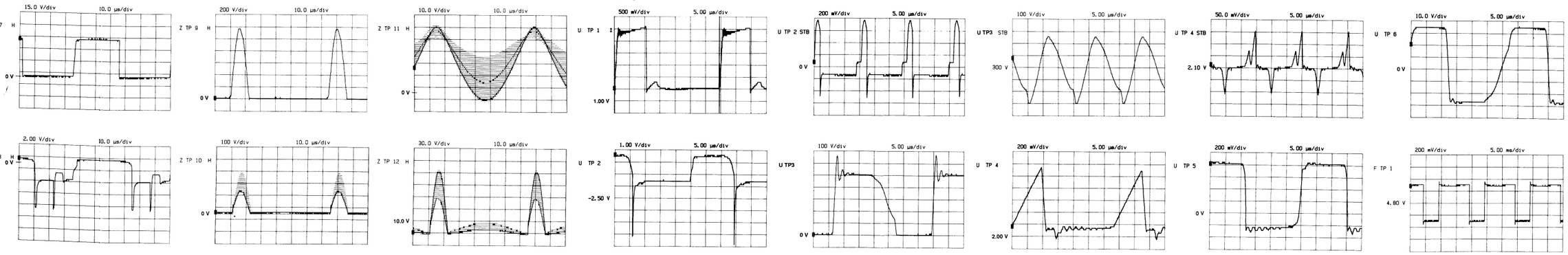



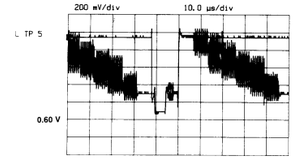



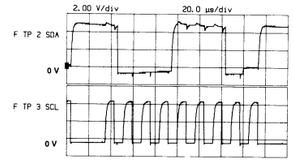



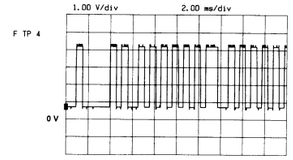

FC300
YC300
NC300
LL302
PC 300
(CIRCUIT DIAGRAM ON THE LEFT)
HOR
DEFL. YOKE
PW321
PW311
PW331
FU1200
FU1201
PY55-600
Z-DY
J 03303704
AUDIO AMPLIFIER
PWRF
3x BC327-25
2xHD11056p
ICf1 SDA2526
ICf2 SDA 2080
IC11 TDA8440
IC12 TDA8440
ICj1 TDA4050B
2x BC547B
BC557B
BC547B
1N4148
to RF-mod.
CVBS
STATUS CVBS
RGB INV
S-ON
P-ON
MODE 2
STA 1
STA 2
IR
HOLD 1
HOLD 2
12V
SDA
SCL
5V
LED
R
L
LB
AS4
POR
STEP
HUOLTO
COPY
FT
SP SOUND
SOURCE


15.0 V/div 10.0 µs/div
200 V/div 10.0 µs/div
10.0 V/div 10.0 µs/div
500 mV/div 5.00 µs/div
200 mV/div 5.00 µs/div
100 V/div 5.00 µs/div
50.0 mV/div 5.00 µs/div
10.0 V/div 5.00 µs/div
2.00 V/div 10.0 µs/div
100 V/div 10.0 µs/div
30.0 V/div 10.0 µs/div
1.00 V/div 5.00 µs/div
100 V/div 5.00 µs/div
200 mV/div 5.00 µs/div
200 mV/div 5.00 ms/div

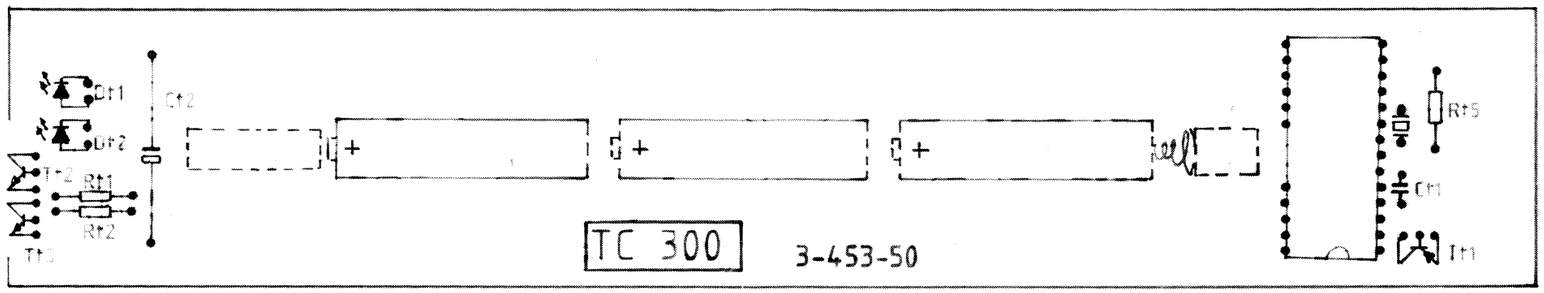



200 mV/div
10.0 µs/div
L TP 5
0.60 V


2.00 V/div
20.0 µs/div
F TP 2 SDA
0 V
F TP 3 SCL
0 V

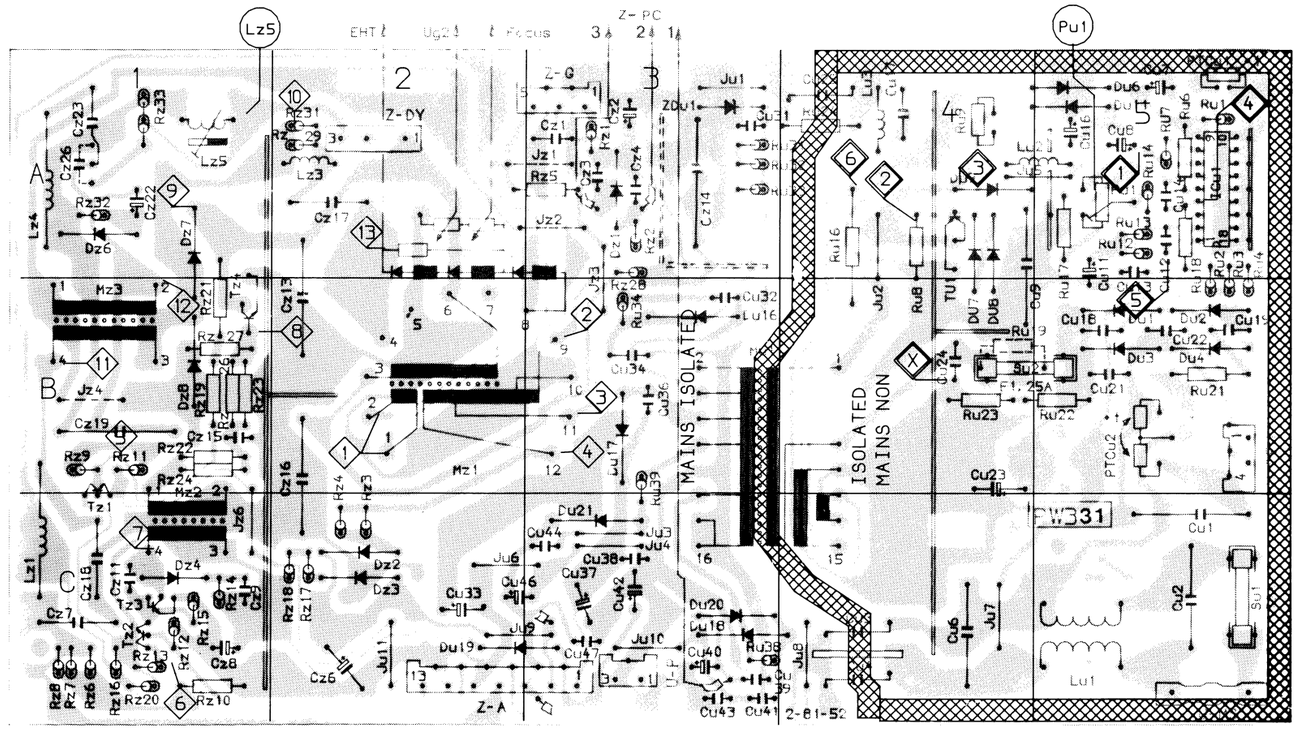

1.00 V/div
2.00 ms/div
F TP 4
0 V

## TC 300 (726 704 0)



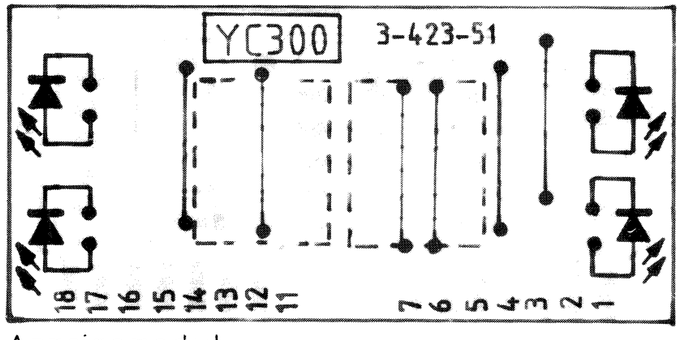

Fernbedienungs-Modul

## PW 331 (727 036 6)



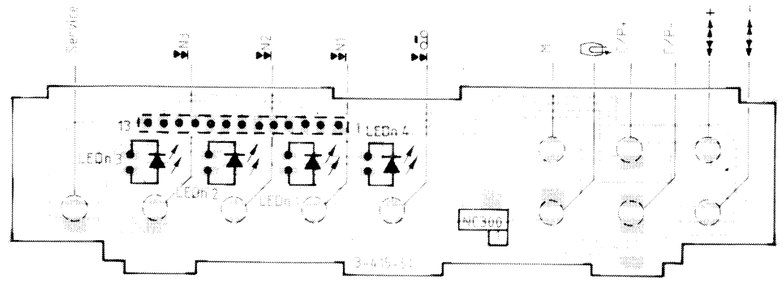

Netzteil/Hor. Abl.

## YC 300 (726 708 1)



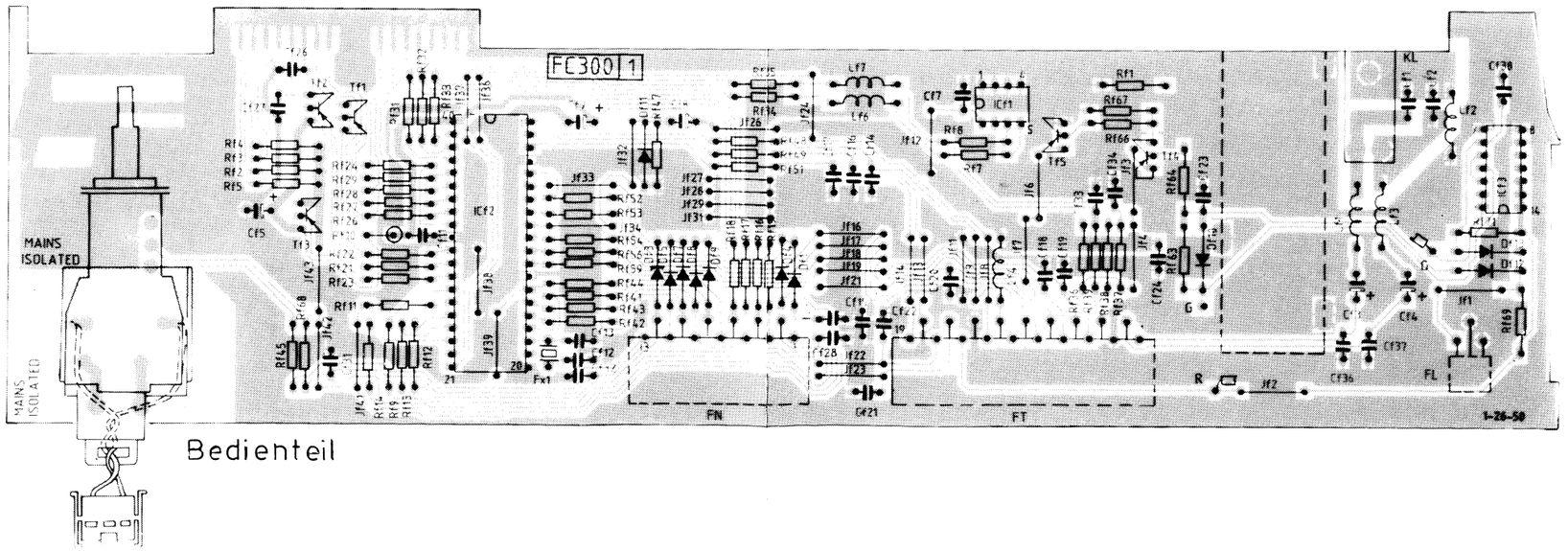

Anzeigemodul

## NC 301 (726 709 9)



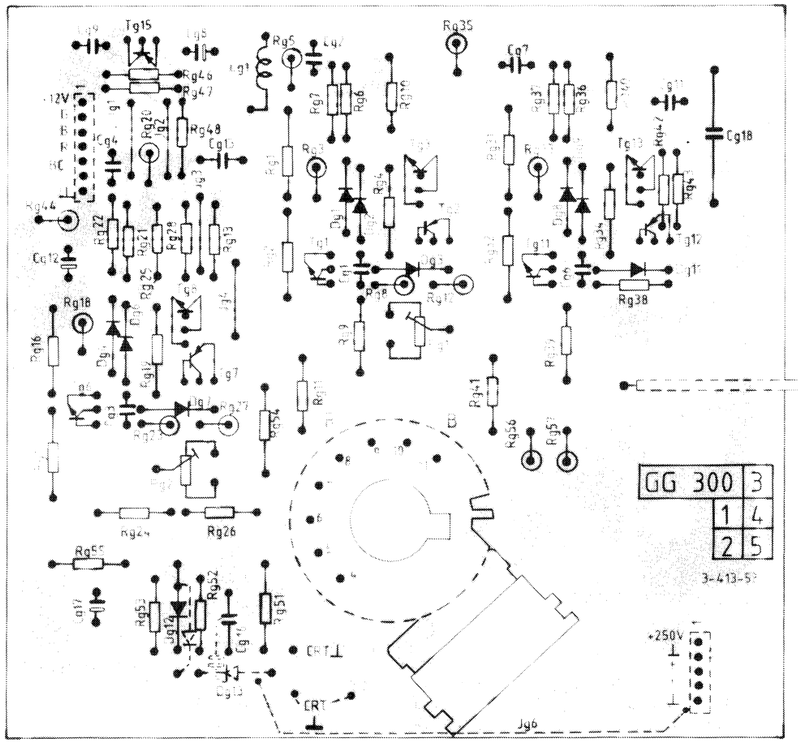

Tastatur

## FC 300 (726 707 3)



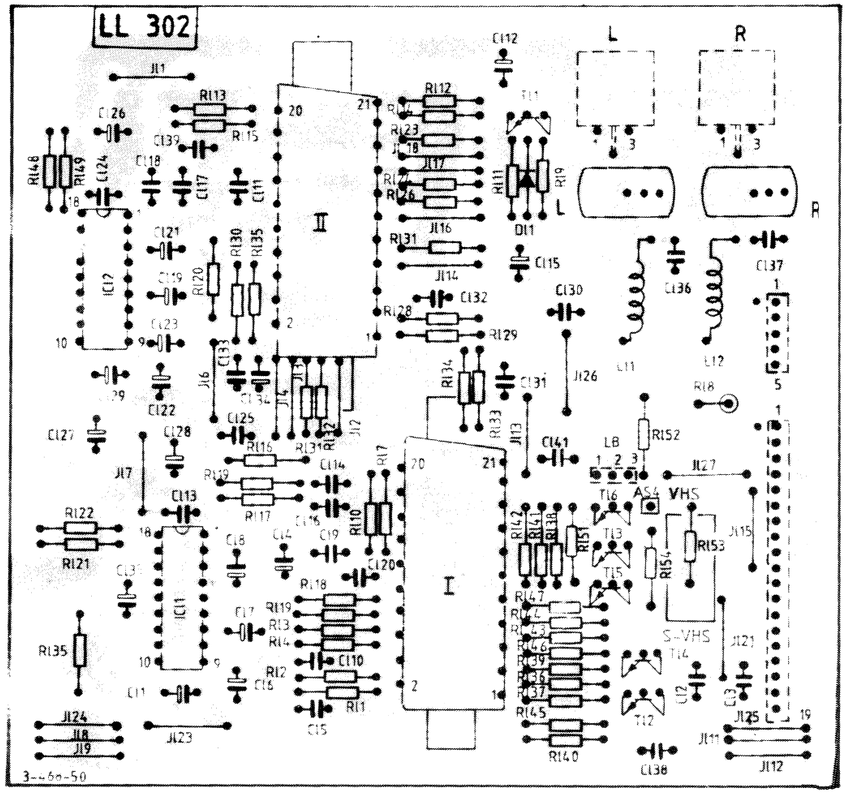

Bedienteil

## GG 300 (726 710 7)




Bildröhren-Modul

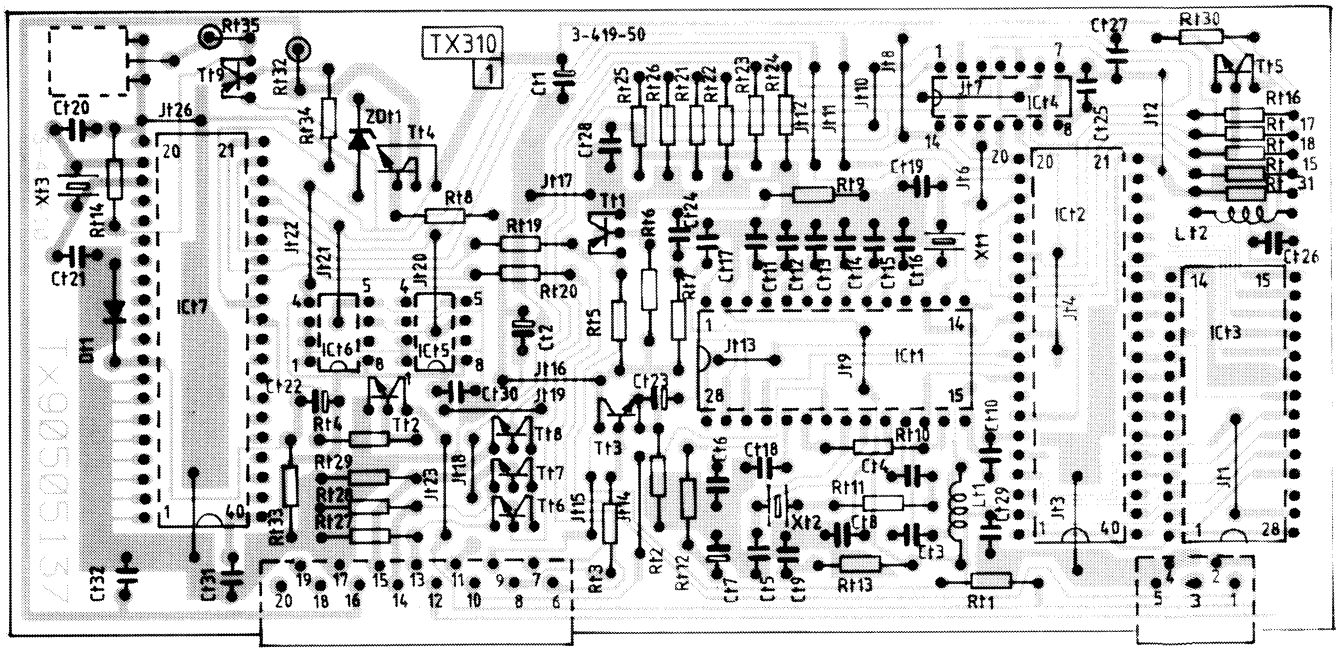
## LL 302 (727 954 0) S-VHS




Anschluß-Modul

TELETEXT6
TX 310

# TX 310 (727 041 6)




Videotext-Decoder

ACHTUNG !

Nach jedem Austausch oder Nachrüsten einer Baugruppe muß das Gerät neu konfiguriert werden !

1. Hierzu Gerät in Service-Mode schalten (P/C-Taste am FB-Geber drücken und innerhalb von 8 Sekunden den Service-Schalter am Bedienteil. Im Anzeigefeld leuchtet dann ein Dezimalpunkt, alle übrigen Leuchtsegmente verlöschen).

2. Jetzt auf der Fernbedienung die Zifferntasten 0 und 4 drücken (Kennziffer 04). Der Prozessor prüft nun die Adressen aller busgesteuerten Schaltungen. Nach Durchlaufen der Zahlenkombinationen erscheint wieder die Anzeige "04".

3. Die Konfiguration durch Drücken der Taste -/-- auf der Fernbedienung speichern.

4. Der Empfänger nimmt die neue Konfiguration erst nach Aus- und Wiedereinschalten des Netzschalters in Gebrauch.